

AGREEMENT

Concerning the Operation of the Oroville
Division of the State Water Project
For Management of Fish and Wildlife

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THIS AGREEMENT is made this 26th day of August 1983 between the California Department of Water Resources (hereinafter referred to as "Water Resources") and the California Department of Fish and Game (hereinafter referred to as "Fish and Game") for management of fish and wildlife in the Feather River below the Thermalito Diversion Dam and Thermalito Afterbay river outlet in compliance with Articles 29, 30, 43, 45, 46 and 47 of the License for Project 2100 (hereinafter referred to as License 2100) issued to Water Resources by the Federal Power Commission (now entitled Federal Energy Regulatory Commission) on February 11, 1957, and amended January 22, 1964, and April 15, 1966, August 6, 1968, March 17 and June 14, 1977 and January 26, 1982. This Agreement supersedes the Agreement and Stipulation dated July 19, 1967.

1. Water Resources shall release into the Feather River from the Thermalito Diversion Dam for fishery purposes a flow of 600 cfs. Such flow will be the total of flows from the diversion dam outlet, diversion dam power plant, and the Feather River Fish Hatchery pipeline. 1/ Any modification to this flow for purposes of study and experimentation is to be mutually agreeable to the parties hereto. Based upon the April through July unimpaired runoff of the Feather River near Oroville of the preceding water year (October 1 through September 30), additional water shall be released from the Thermalito Afterbay river outlet to maintain flows in the Feather River immediately below said outlet and to the mouth of the Feather River at Verona in accordance with the following schedule, provided that such additional releases will not cause Oroville Reservoir to be drawn below elevation 733 feet (approximately 1,500,000 acre-feet):

1/ Total flow to be 400 cfs until diversion dam power plant becomes operational.

The Preceding April
thru July Unimpaired
Runoff* of the Feather
River near Oroville,
Percent of Normal**

Minimum Flow Schedule in Feather River Below Thermalito Afterbay		
October through February	March	April through September

55% or greater	1,700 cfs	1,700 cfs	1,000 cfs
Less than 55%	1,200 cfs	1,000 cfs	1,000 cfs

* As computed for inclusion in Water Resources' Bulletin 120,
"Water Conditions in California-Fall Report".

** Normal is defined as the April through July 1911-1960 mean
unimpaired runoff near Oroville of 1,942,000 acre-feet.

If the April 1 runoff forecast in a given water year indicates that, under normal operation of the State Water Project (hereinafter referred to as the Project), the reservoir level will be drawn to elevation 733 feet (approximately 1,500,000 acre-feet), releases for fish life in the above schedule may suffer monthly deficiencies in the same proportion as the respective monthly deficiencies imposed upon deliveries of water for agricultural use from the Project. However, in no case shall the fish water releases in the above schedule be reduced by more than 25 percent.

2. If for two or more consecutive water years the April through July unimpaired runoffs average less than 60 percent of normal, then the minimum flow shall be as shown in Paragraph 1 for runoff of less than 55 percent.
3. If, during the period of October 15 through November 30, the average highest one hour flow of the combined project releases into the Feather River from the Thermalito Diversion Dam and the Thermalito Afterbay exceeds 2,500 cfs, except for flood control releases, accidents, project failures, major or unusual maintenance, then the minimum flow in the Feather River as specified in Paragraph 1 for the period of October through March will be modified so that the flow is not less than 500 cfs below the average highest one hour flow.
4. Flow releases in the river at the Thermalito Afterbay river outlet under 2,500 cfs shall not be decreased at more than 200 cfs during any 24-hour period. Exceptions to this flow condition are increases in flow, flood control releases, accident, mechanical or electrical failure and outages due to major or unusual maintenance. When it is mutually agreeable to the parties, deviations from these conditions may be made.

5. To facilitate downstream movement of juvenile salmon and steelhead in the April-June period, Fish and Game shall have the option of either or both:
 - (a) Having a portion or the total amount of water provided for minimum fish releases from Thermalito Afterbay to the Feather River released in other than constant flows at mutually acceptable times and amounts.
 - (b) Having water in excess of scheduled minimum fish flow releases made ahead of time in a fluctuating pattern. Water Resources will notify the Department of Fish and Game by April 10 concerning the availability of such excess water

Exercise of the above options shall be on condition that there will be no interference with Water Resources' operation of the Project for primary Project purposes. Instantaneous minimum flow limitations in Paragraph 1 and flow fluctuation limitations in Paragraph 4 do not apply to fish flow release modifications described in this paragraph.

6. The ongoing American Shad Fishery Study will continue until January 1, 1986. If the study indicates, the parties will agree to modify operations in the Feather River to benefit the shad fishery.
7. As provided in Section 46 of License 2100, Water Resources agrees to: "prevent loss, removal, disturbance, and the compaction or shifting of gravel of the Feather River channel downstream from the Thermalito diversion dam except as may be appropriate for the protection or the improvement of fish habitat." Each year, by June 1, Fish and Game will recommend to Water Resources for mutual agreement, a spawning gravel maintenance program to be implemented that calendar year.
8. Water Resources agrees to pay with project reimbursable funds for the operation and maintenance of the Feather River Fish Hatchery to the extent of preservation responsibilities of the State Water Project. Fish production in greater extent than Water Resources preservation responsibility will be financed by nonreimbursable funding which will be shared by Fish and Game and Water Resources.
9. The water supply for the Feather River Fish Hatchery shall be at the temperatures shown in the following schedule. A deviation of plus or minus 4 degrees is allowable between April 1 through November 30.

<u>Period</u>	<u>Degrees Fahrenheit</u>
April 1 - May 15	51
May 16 - 31	55
June 1 - 15	56
June 16 - August 15	60
August 16 - 31	58
September 1 - 30	52
October 1 - November 30	51
December 1 - March 31	No greater than 55

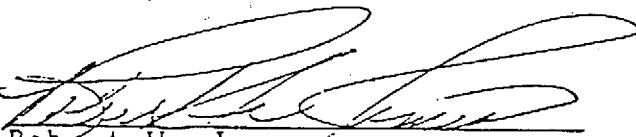
It shall be an objective of Water Resources to release water below Thermalito Diversion Dam and Thermalito Afterbay river outlet, under schedules described in paragraphs 1, 2, and 3, of temperature required to maintain downstream fish resources each year as follows:

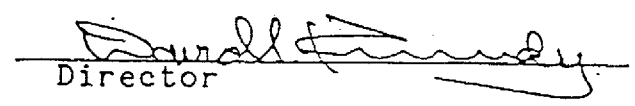
- (a) Provision of suitable temperatures for fall-run salmon not later than September 15.
 - (b) Provision of suitable temperatures below Thermalito Afterbay river outlet for shad, striped bass, and other warm water fish between May 1 and September 1.
10. The parties hereto agree that compliance with the terms of this Agreement by Water Resources shall constitute full compliance by Water Resources with the requirements of Articles 29, 30, 43, 45, 46, and 47 of License 2100.
11. Upon execution of this Agreement by the parties hereto, Water Resources shall:
- (a) File a copy with the State Water Resources Control Board requesting that the terms and conditions thereof over which the State Water Resources Control Board has jurisdiction be incorporated in any permit issued to Water Resources.
 - (b) File a copy with the Federal Energy Regulatory Commission requesting that it be approved as an exhibit to License 2100 and the following article be added to License 2100:
"Compliance by Licensee with the Agreement between Licensee and the California Department of Fish and Game, dated Aug 26, 1983, shall constitute full compliance with Articles 29, 30, 43, 45, 46 and 47 of this license."

- (c) File a copy with the Secretary of the Interior and the United States Fish and Wildlife Service requesting that they advise the Federal Energy Regulatory Commission that they approve the Agreement and the request made by Water Resources pursuant to subparagraph b above.

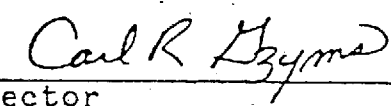
APPROVED AS TO LEGAL FORM
AND SUFFICIENCY:

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES


Robert W. James
Acting Chief Counsel
Department of Water Resources


Director

STATE OF CALIFORNIA
DEPARTMENT OF FISH AND GAME


for Director